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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,537	07/18/2000	Hiroshi Tanaka	49761(868)	8668

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EXAMINER	
PARK, CHAN S	
ART UNIT	**PAPER NUMBER**
2622	7

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/618,537	TANAKA ET AL.	
	Examiner	Art Unit	
	CHAN S PARK	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 July 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/618537, filed on July 18, 2000.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 50 in fig. 1 and 202, 203a, 208a, 603a, 603b in fig. 2. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: a field memory 403a in page 22 is not shown fig. 2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. Figures 11 & 12A-C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to

avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 7 is objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery. It is not clearly understood what "image data" is referring to in the last line of the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 7 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kawamoto U.S. Patent No. 6,486,971.

6. With respect to claim 1, the Kawamoto reference discloses an image processing apparatus (image process device 33) provided with a capability of carrying out variable magnification of image data (col. 8, lines 1-18), comprising:

A single first-in, first-out memory (FIFO 63) for carrying out write/read processing of image data (col. 8, line 59 – col. 9, line 6);

A variable magnification unit (interpolation 61) for carrying out variable-magnification processing of image data based on magnification ratio (col. 8, line 59 – col. 9, line 6); and

Switching means (SEL in fig. 6) capable of switching a processing order of write/read processing of image data carried out at the FIFO memory and variable-magnification processing carried out at the variable magnification unit (col. 8, line 59 – col. 9, line 6).

Please note that fig. 6 is a detail description of the ENLARGING/REDUCING PROCESS 53 of fig. 5 (col. 8, lines 49-51).

7. With respect to claim 2, the Kawamoto reference discloses an image processing apparatus wherein the switching means are provided at an input terminal and output terminal of the FIFO memory, and at an input terminal and output terminal of the variable magnification unit (col. 8, line 59 – col. 9, line 6). Also, please refer to fig. 6.

8. With respect to claim 3, the Kawamoto reference discloses an image processing apparatus wherein the switching means is such that, during image enlargement, variable-magnification processing is carried out at the variable magnification unit following write processing and read processing of image data to and from the FIFO memory, and during image reduction, write processing of image data to the FIFO memory is carried out after variable-magnification processing is carried out at the variable magnification unit (col. 8, line 59 – col. 9, line 20). Please note that the system control device 34 instructs a magnification ratio and the sets selectors accordingly.

9. With respect to claim 4, the Kawamoto reference discloses an image processing apparatus wherein the variable magnification unit comprises an enlarging variable magnification unit for carrying out variable-magnification processing following write processing and read processing of image data to and from the FIFO memory during image enlargement, and a reducing variable magnification unit for writing image data to the FIFO memory after variable-magnification processing is carried out during image reduction (col. 8, line 59 – col. 9, line 20).

10. With respect to claim 5, the Kawamoto reference disclose an image processing apparatus (image process device 33) provided with a capability of carrying out variable magnification of image data (col. 8, lines 1-18), comprising:

A first-in, first-out line memory (FIFO 63) for storing one line worth of image data (col. 9, lines 21-37); and

A variable-magnification processing section for reading image data from the FIFO line memory a number of times corresponding to magnification ratio (col. 9, lines 38-50).

11. With respect to claim 7, the Kawamoto reference disclose an image processing apparatus (image process device 33) provided with a capability of carrying out variable magnification of image data (col. 8, lines 1-18), comprising:

A first-in, first-out line memory (FIFO 63) for storing one line worth of image data (col. 9, lines 21-37); and

A variable-magnification processing section (CPU of the system control device 34) for switching (selector on the right side of fig. 6) among a plurality of output lines

(two output lines of 62) of the FIFO line memory (FIFO 63 in conjunction with read/write speed control 62) in accordance with magnification ratio (col. 7, lines 26-35) and reading image data in accordance to magnification ratio (col. 9, lines 38-50).

Please note that the Office interpreted the last line "...reading image data" as "...reading image data in accordance to magnification ratio.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is also rejected under 35 U.S.C. 102(b) as being clearly anticipated by Amakawa et al. U.S. Patent No. 5,764,370.

12. With respect to claim 5, the Amakawa et al. reference disclose an image processing apparatus (image forming apparatus of fig. 1) provided with a capability of carrying out variable magnification of image data (col. 3, lines 10-25), comprising:

A first-in, first-out line memory (FIFO 31 also referred as a line memory) for storing one line worth of image data (col. 4, lines 5-12); and

A variable-magnification processing section for reading image data from the FIFO line memory a number of times corresponding to magnification ratio (col. 4, lines 5-12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amakawa et al. as applied to claim 5 above, and further in view of the combination of Applicant's Admitted Prior Art in the Background of the specification in page 1-4 (hereinafter admitted prior art).

13. With respect to claim 6, the Amakawa et al. reference teaches all the limitations of claim 5. The reference further discloses the image processing apparatus of claim 5, wherein the variable magnification unit is such that one line worth of image data written to the FIFO line memory is read a plurality of times during enlargement of image data (col. 6, lines 1-18).

The Amakawa et al. reference does not disclose expressly that the image data written to the FIFO line memory is read intermittently, skipping of data occurring in units of lines, during reduction of image data.

However, the admitted prior art teaches that the image data written to the FIFO line memory is read intermittently, skipping of data occurring in units of lines, during reduction of image data (lines 6-12 in page 2).

Amakawa et al. and the admitted prior art are analogous art because they are from the same filed of endeavor that is the magnification image processing art.

At the time of the invention, it would have been obvious to person of ordinary skill in the art to combine the image processing apparatus of Amakawa et al. with the method of skipping of line memory data during reduction of the admitted prior art.

The suggestion/motivation for doing so would have been to reduce the image data read out from the image memory (col. 4, lines 47-49 of the Amakawa et al. reference).

Therefore, it would have been obvious to combine Amakawa et al. with the admitted prior art to obtain the invention as specified in claim 6.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amakawa et al. as applied to claim 5 above, and further in view of Miyamoto et al. U.S. Patent No. 5,774,234.

14. With respect to claim 7, the Amakawa et al. reference teaches all the limitations of claim 5.

The reference does not explicitly disclose two FIFO line memories for respectively storing two mutually adjacent lines of image data.

However, Examiner takes Official Notice that having two FIFO line memories for respectively storing two mutually adjacent lines of image data for variable-magnification processing is well known in magnification image processing art.

Furthermore, the Miyamoto et al. reference discloses two FIFO line memories (301-1,2 in fig. 5) for respectively storing two mutually adjacent lines of image data (col. 3, lines 31-37 & col. 4, lines 23-26), wherein variable-magnification processing is carried

at the variable-magnification processing section (magnification varying circuit 104) based on image data read from the two FIFO line memories (col. 3, lines 31-37).

Amakawa et al. and Miyamoto et al. are analogous art because they are from the same field of endeavor that is magnification image processing art.

At the time of the invention, it would have been obvious to person of ordinary skill in the art to combine the image processing apparatus of Amakawa et al. with the a plurality of FIFO line memories of storing adjacent lines taught by Miyamoto et al.

The suggestion/motivation for doing so would have been to interpolate image data for two adjacent lines to form image data for one line when reduction of 50% is performed.

Therefore, it would have been obvious to combine Amakawa et al. with Miyamoto et al. to obtain the invention as specified in claim 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Chan S. Park
December 9, 2003

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